CAD-0210 Series
Communications Appliance

User's Manual

Revision: 1.1

CE

This certificate of conformity of CAD-0210 series with actual required safety standards in accordance with 89/366 ECC-EMC Directive and LVD 73/23 ECC

UL

This product meets all safety requirements per UL60950 standard.

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TÜV CERT ISO 9001

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Chapter 1 Introduction

1.1 About This Manual

This manual describes all required information for setting up and using the CAD-0210 All mentioned below applies to the whole system, unless specially stated.

CAD-0210 provides the essential components for delivering optimal performance and functionality in the value communications appliance market segment. This manual should familiarize you with CAD-0210 operations and functions. CAD-0210 family has Four and Six on-board Ethernet ports to serve communication appliances, such as Firewall, which needs more Ethernet ports to connect external network (internet), demilitarized zone and internal network.

CAD-0210 features:

- Embedded Intel Atom N450/D510/D410 1.66 GHz
- Up to 4GB support un-buffered SODIMM DDR2 800
- Four USB ports(two is behind) and two COM ports
- Two SATA connectors for SATA Hard disk
- PCI-E architecture with totally six x1 PCI-E interfaces
- One PCI slot for expansion
- Provides absolute high flexibility of customized I/O configuration
- Can be either wall-mounted or placed on a desktop

1.2 Manual Organization

The manual describes how to configure your CAD-0210 system to meet various operating requirements. It is divided into three chapters, with each chapter addressing a basic concept and operation of this whole system.

Chapter 1: Introduction. This section briefly talks about how this document is organized. It includes some guidelines for users who do not want to read through everything, but still helps you find what you need.

Chapter 2: Hardware Configuration Setting and Installation. This chapter shows how the hardware is put together, including detailed information. It shows the definitions and locations of Jumpers and Connectors that you can easily configure your system. Descriptions on how to properly mount the main memory are also included to help you get a safe installation. Reading this chapter will teach you how to set up CAD-0210.

Chapter 3: Operation Information. This section gives you illustrations and more information on the system architecture and how its performance can be maximized.

Any updates to this manual, technical clarification and answers to frequently asked questions would be posted on the web site:
http://www.cas-well.com/products/index.php

1.3 Technical Support Information

Users may find helpful tips or related information on Caswell's web site: ***http://www.cas-well.com*** A direct contact to Caswell's technical person is also available. For further support, users may also contact Caswell's headquarter in Taipei or your local distributors.

Taipei Office Phone Number: +886-2-7705-8888

1.4 Board Layout

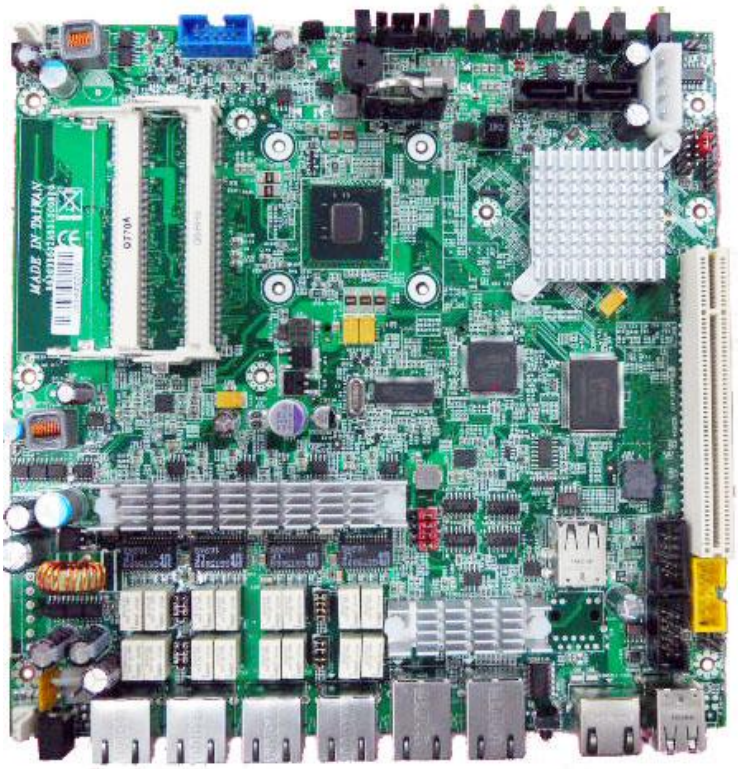


Figure 1-1 Board Layout of CAD-0210 M/B

1.5 System Block Diagram

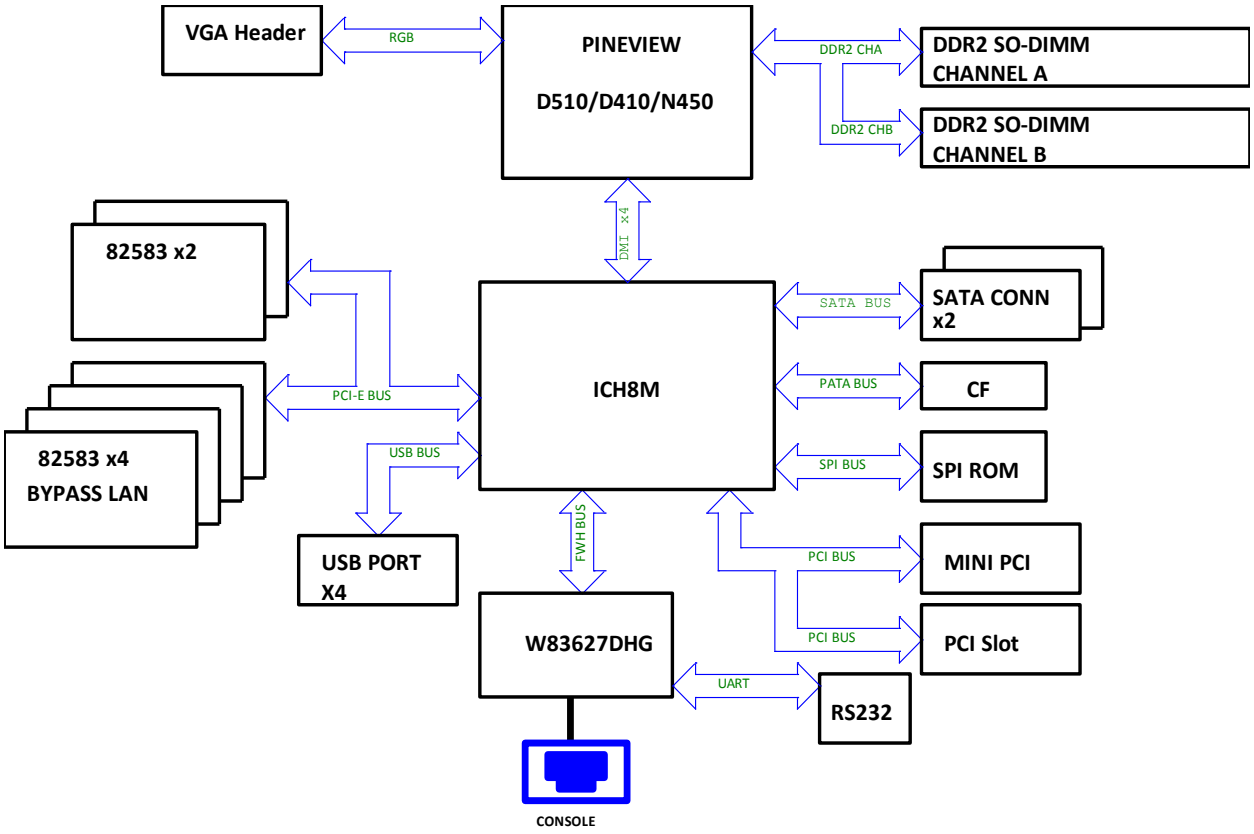
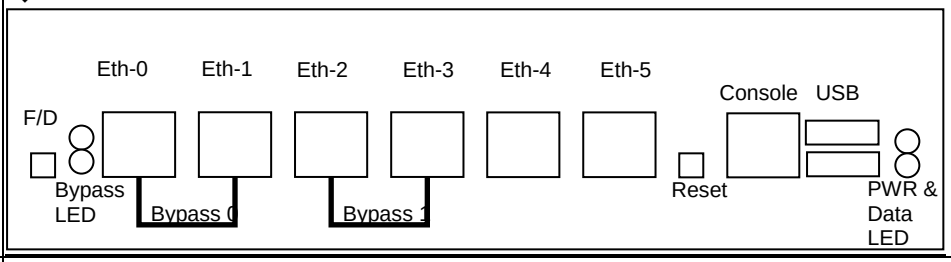


Figure 1-2 CAD-0210 Basic Block Diagram

1.6 Product Specifications

<table>
<tr><th>#</th><th>Feature</th><th>Detailed Description</th></tr>
<tr><td>1</td><td>CPU</td><td>Onboard Intel Atom N450/D510/D410 1.66 GHz</td></tr>
<tr><td>2</td><td>CPU Board</td><td>◆ Intel Pineview-M and Pineview-D with Intel® 82801HM I/O Controller (ICH8M)
◆ Board size: 203 mm / 8” (L) x 203 mm / 8” (W)</td></tr>
<tr><td>3</td><td>System Memory</td><td>◆ Two sockets for each 200-pin SODIMM.
◆ Supports un-buffered DDR2 667/800 up to 4GB w/ Pineview-D processors and DDR2 667 up to 2 GB w/ Pineview-N processor</td></tr>
<tr><td>4</td><td>Power Supply</td><td>◆ FSP FSP060-DBAB1 60W 12V adapter
◆ AC On/Off switch
◆ Certification: CE, UL, 3C</td></tr>
<tr><td>5</td><td>Ethernet</td><td>◆ Six PCI-E (x1) Gigabit Ethernet port based on Intel 82583V Ethernet controller from ICH8M. PXE function is included. (Eth-0)
◆ one internal RJ45 share one Ethernet above
◆ Two Gen 1.5 bypass segments</td></tr>
<tr><td>6</td><td>SATA Interfaces</td><td>◆ Two SATA Interfaces on board</td></tr>
<tr><td>7</td><td>Front Panel</td><td>◆ No EZIO on STD product but reserved for customer demand.
◆ RJ45 connector for system console, tab-down, no LED. Pin-definition refers to Appendix-B. One integrated connector with dual-USB connector as option.
◆ Six RJ-45 connector for PCI-E (x1) GbE interfaces
◆ Hardware Reset Button
◆ Factory Default button. (On board or by cable)
◆ Reserved Power button for project inquiry.
◆ LED: Signaling standard refer to Appendix-E
– System LED: Power, Data access.
– Ethernet LED: For every Ethernet interface there should be LEDs for link status and speed of LAN-ports.
– Bypass LED
◆
 
</td></tr>
<tr><td>8</td><td>Rear Panel</td><td>◆ Reserved semi-cutting opening of D-Sub 15 connector.
◆ Power on/off switch
◆ Opening for system ventilation.</td></tr>
<tr><td>9</td><td>Dimension</td><td>◆ W:250mm x D:213mm x H: 55mm (Desktop)</td></tr>
<tr><td>10</td><td>Environmental requirement</td><td>
<table>
<tr><td></td><td>Operating</td><td>Storage</td></tr>
<tr><td>Acoustics</td><td>< 45dB</td><td>--</td></tr>
<tr><td>Temperature</td><td>0°C to 40°C</td><td>-20°C to 75°C</td></tr>
<tr><td>Relative Humidity</td><td>10 to 90% RH</td><td>5 to 95% RH</td></tr>
</table>
</td></tr>
</table>

#	Feature	Detailed Description		
		Shock	0.5 Sine shock, 10G peak, 10 +/- 3 ms on (X,Y,Z) axis	
		Vibration	0.5G (Peak) / 5~500 Hz, 2hours at each of Z axis	(Packaged) Sine Wave,2.0G / 5~500 Hz, 2hours at each axis(X,Y,Z)
		Transportation		(Packaged) 0.5 sine shock, 50G peak on each surface.
		Drop		(Packaged) H= 1.2M
		Random Vibration		(Packaged) Sine Wave,2.8G / 5~500 Hz, 1hours at each axis(X,Y,Z)

Note 1: For system stability and performance, please install Fedora Core 4 (2.6.11-1.1369) and Intel 82574 driver version e1000e-0.5.8.2 and add Linux kernel option on boot loader

Note 2: For Linux kernel 2.4 distribution, add kernel option on boot loader “hda=noprobe hdb=noprobe”
This parameter should increase the SATA HDD performance
For example: kernel /boot/vmlinuz-2.6.9-42.0.3.ELsmp ro root=LABEL=/ rhgb quiet had=noprobe hdb=noprobe

Note 3: For Linux kernel 2.6 distribution add kernel option on boot loader “ all-generic-ide”
For example: kernel /boot/vmlinuz-2.6.9-42.0.3.ELsmp ro root=LABEL=/ rhgb quiet all-generic-ide ==> **"all-generic-ide"**, this option will let kernel identify the device on IDE bus, and enable DMA

Note 4: For system stability, when execute software reset, system will delay 2~3 seconds; when execute hardware reset, system will cut off the power 1~2 seconds, the foregoing situation is normal.

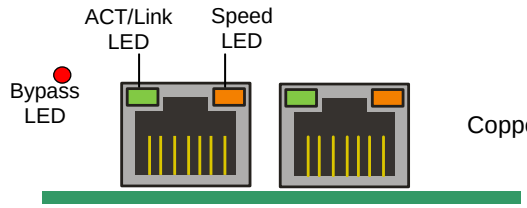
1.7 LED Signaling Standard

1. Power and Data-access LED

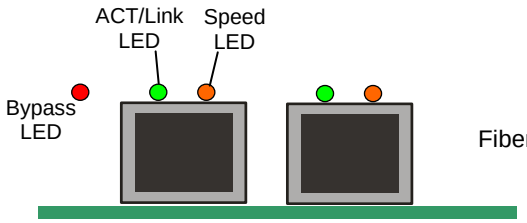
Lettering	Symbol	Function	Color	Signaling
PWR	⏻	Power status	Green	Off – No power, system off. On – Power good, system on.
Data Access	🛢	Data Access	Red	Off – no data access through IDE or SATA channel On – data is in transition through IDE or SATA channel

2. Ethernet LED

Label	Color	Indication	Status
ACT/LINK	**Green Or Others**	**On**	1. The Ethernet port is receiving power. 2. Good linkage between the Ethernet port and its supporting hub.
		Off	1. The adapter and switch are not receiving power. 2. No connection between both ends of network cable. 3. The drivers of Ethernet have not been loaded or does not function correctly.
	Green Or Others	**Flashing**	The adapter is sending or receiving network data. The frequency of the flashes varies with the amount of network traffic.
SPEED	**Yellow**	**On**	ACT/LNK LED must on then this LED show the operating at 1000 Mbps. If ACT/LINK is off and this function will be disable.
	Green	**On**	ACT/LNK LED must on then this LED show the operating at 100 Mbps. If ACT/LINK is off and this function will be disable.
		Off	ACT/LNK LED must on then this LED show the operating at 10 Mbps. If ACT/LINK is off and this function will be disable.



Copper Ethernet Interface



Fiber/SFP Ethernet Interface

3. Bypass LED

LED Status	green	red	off
Bypass Mode/Status	normal mode	bypass mode, triggered by WDT expiring	power off, in normal or bypass mode which is defined by customer

Chapter 2 Get Started

This section describes how the hardware installation and system settings should be done.

2.1 Included Hardware

The following hardware is included in your kit:

- CAD-0210 Communication Appliance System Board.
- One null serial port cable.
- One Power & SATA adapter.
- Hard disk ground cable.
- Chassis foot pad.
- AC-DC Adapter
- Power cable.

2.2 Before You Begin

To prevent damage to any system board, it is important to handle it with care. The following measures are generally sufficient to protect your equipment from static electricity discharge:

When handling the board, uses a grounded wrist strap designed for static discharge elimination and touches a grounded metal object before removing the board from the antistatic bag. Handle the board by its edges only; do not touch its components, peripheral chips, memory modules or gold contacts.

When handling memory modules, avoid touching their pins or golden edge fingers. Put the value communications appliance system board and peripherals back into the antistatic bag when they are not in use or not installed in the chassis.

Some circuitry on the system board can continue operating even though the power is switched off. Under no circumstances should the Lithium coin cell be used to power the real-time clock be allowed to be shorted. The coin cell can heat under these conditions and present a burn hazard.

WARNING!

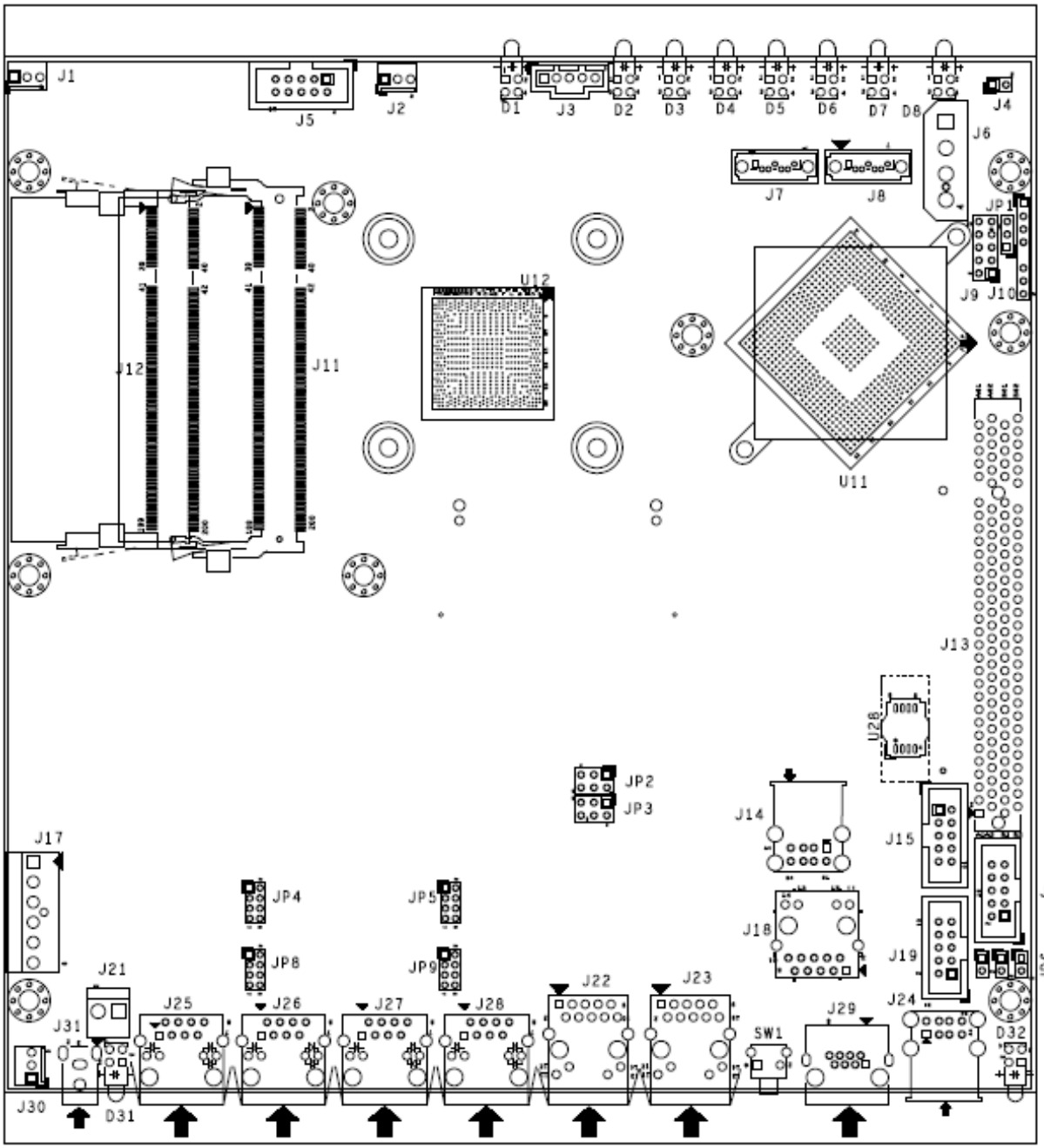
1. **"CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions"**
2. **This guide is for technically qualified personnel who have experience installing and configuring system boards. Disconnect the system board power supply from its power source before you connect/disconnect cables or install/remove any system board components. Failure to do this can result in personnel injury or equipment damage.**
3. **Avoid short-circuiting the lithium battery; this can cause it to superheat and cause burns if touched.**
4. **Do not operate the processor without a thermal solution. Damage to the processor can occur in seconds.**
5. **Do not block air vents. Minimum 1/2-inch for clearance required.**

2.3 Hardware Configuration Setting

This section gives the definitions and shows the positions of jumpers, headers and connectors. All of the configuration jumpers on CAD-0210 are in the proper position. The default settings set by factory are marked with a star (★).

Jumpers

In general, jumpers on CAD-0210 system board are used to select options for certain features. Some of the jumpers are configurable for system enhancement. The others are for testing purpose only and should not be altered. To select any option, cover the jumper cap over (Short) or remove (NC) it from the jumper pins according to the following instructions. Here NC stands for “Not Connected”.



CAD-0210 Jumper Table

Jumper Setting:

JP1: RTC Clear COMS (Default 1-2)
JP2/JP3: Ethernet Bypass mode & WDT mode selection (Default 1-2/2-4)
JP4/JP5/JP8/JP9: Ethernet Bypass mode & Open mode selection (Default: Close)
JP7: WDT Software Control Selection (Default : Open)

JP1: RTC Clear COMS (Default 1-2)

JP1	Function
1-2	Normal ★
2-3	CMOS Clear

JP2/JP3: Ethernet Bypass mode & WDT mode selection (Default 1-2/2-4)

JP2	Function
1-3	Normal Mode★
3-5	Bypass Mode
2-4	Disable WDT★
4-6	Enable WDT

JP4/JP5/JP8/JP9: Ethernet Bypass mode or Open mode selection (Default: Close)

JP4/5/7/8	Function	
1-2	Close: Bypass ★	Open: Open mode
3-4	Close: Bypass ★	Open: Open mode
5-6	Close: Bypass ★	Open: Open mode
7-8	Close: Bypass ★	Open: Open mode

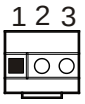
JP7: WDT Software Enable/Disable Control Selection (Default : Open)

JP7	Function	
1-2	Close: Enable	Open: Disable ★

Connectors Function Description:

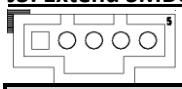
J1/J2/J30: 3P FAN Power Connector
J3: Extend SMBUS Interface Connector
J4: Factory to Default Setting Pin Header
J5: VGA Connector
J6: +5V & +12V Power Connector
J7/J8: SATA Connector
J9: GPIO PIN Header
J11/J12: DDR2 SO-DIMM
J13: PCI SLOT
J14/J24:Dual Port USB Connector
J15: PS/2 Keyboard & Mouse Pin Header
J16: RS232 PIN Header
J17: AT 6P Power IN Connector
J18: 180D Ethernet Connector
J19: Debug port Pin Header
J20: Power ON Button Pin Header
J25/J26/J27/J28 : RJ45 LAN Connector w/o transformer
J29: Console Connector
J32: Mini PCI Connector
J33: CF Socket

J1,J2,J30: 3P FAN Power Connector



PIN No.	Signal Description
1	Ground
2	+12V
3	FAN Speed IN (NC)

J3: Extend SMBUS Interface Connector



PIN No.	Signal Description
1	SMB_CLK
2	SMB_DAT
3	SMB_ALERT
4	GND
5	+3.3V

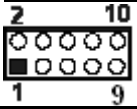
J5: VGA Connector

Pin	Signal Name	Pin	Signal Name
1	RED	2	DDCCLK
3	GREEN	4	Ground
5	BLUE	6	DDCDATA
7	HSYNC	8	Ground
9	VSYNC	10	N/C

J6: +5V & +12V Power Connector

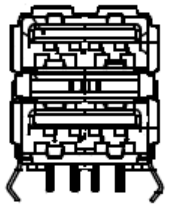
PIN No.	Signal Description
1	+12V
2	GND
3	GND
4	+5V

J9: GPIO PIN Header



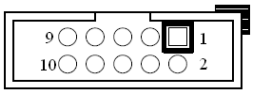
PIN No.	Signal Description
1	GPIO
2	GPIO
3	GPIO
4	GPIO
5	GPIO
6	GPIO
7	GPIO
8	GPIO
9	GND
10	5VSB

J14/J24:Dual Port USB Connector



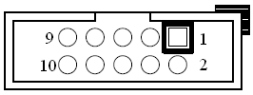
PIN No.	Signal Description
A1	+5V
A2	USB0-
A3	USB0+
A4	GND
B1	+5V
B2	USB1-
B3	USB1+
B4	GND

J15: PS/2 Keyboard & Mouse Pin Header



Pin No.	Signal Description
1	Mouse DAT
2	Keyboard DAT
3	NC
4	NC
5	GND
6	GND
7	+5V
8	+5V
9	Mouse Clock
10	Keyboard Clock

J16: RS232 PIN Header



Pin No.	Signal Description
1	NC
2	NC
3	RXD (Receive Data)
4	RTS (Request to Send)
5	TXD (Transmit Data)
6	CTS (Clear to Send)
7	NC
8	NC
9	GND

10	NC

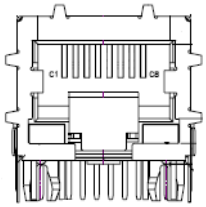
J17: 6P AT Power IN Connector

PIN No.	Signal Description
1	+5V
2	+5V
3	GND
4	GND
5	GND
6	+12V

J20: POWER ON Button Pin Header

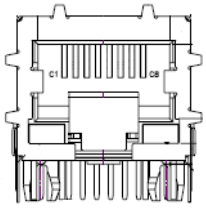
PIN No.	Signal Description
1	Power on signal
2	GND

J22/J23: RJ45 LAN Connector



PIN No.	Signal Description
1	MDI0+
2	MDI0-
3	MDI1+
4	MDI1-
5	NC
6	GND
7	MDI2+
8	MDI2-
9	MDI3+
10	MDI3-
11	LINK#
12	ACTIVE
13	LINK_1000#
14	LINK_100#

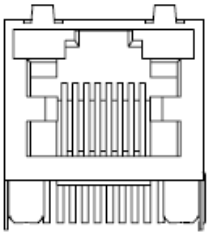
J25/J26/J27/J28 : RJ45 LAN Connector w/o transformer



PIN No.	Signal Description
1	TD1+
2	TD1-
3	TD2+
4	TD3+
5	TD3-
6	TD2-
7	TD4+
8	TD4-

9	LINK#
10	ACTIVE
11	LINK_100#
12	LINK_1000#

J29: Console Connector



PIN No.	Signal Description
1	RTS#
2	DTR#
3	TXD#
4	GND
5	GND
6	RXD#
7	DSR#
8	CTS#

2.4 The Chassis

The system is integrated in a customized chassis (***Fig. 2-1, Fig. 2-2***). On the front panel you will find the Power LED, Hard Disk LED and LAN LED. The back panel has Six LAN ports and a COM port.

Fig. 2-1 *Front view of the Chassis*

Fig. 2-2 *Back view of the Chassis*

2.5 Open the Chassis

1. Take off the four screws (three at the rear side and two at the right/left side and remove the top lead (***Fig. 2-3***).

Fig. 2-3 *Take off four screws*

2. The top lead (***Fig. 2-4***) can be removed from the base stand (***Fig. 2-5***).

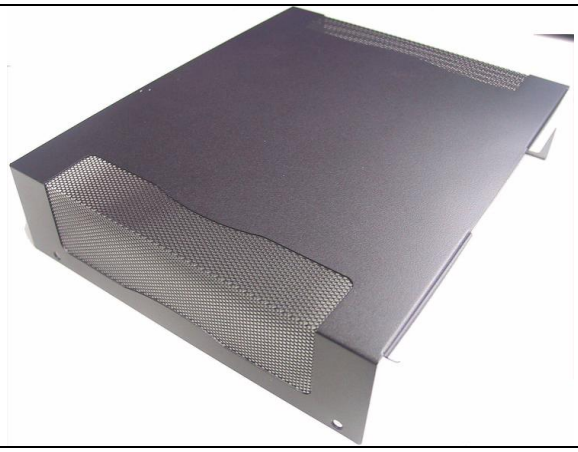


Fig. 2-4 *The top lead*

Fig. 2-5 *The base stand*

2.6 Install Heat-sink

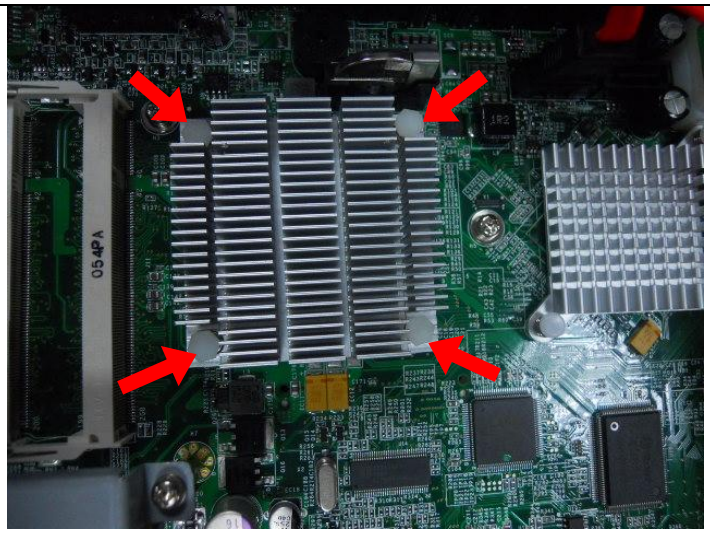
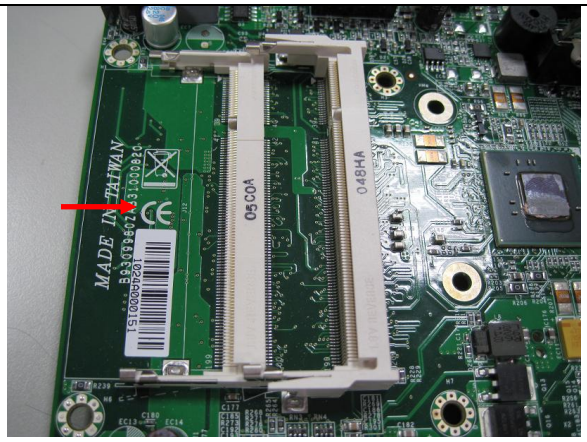
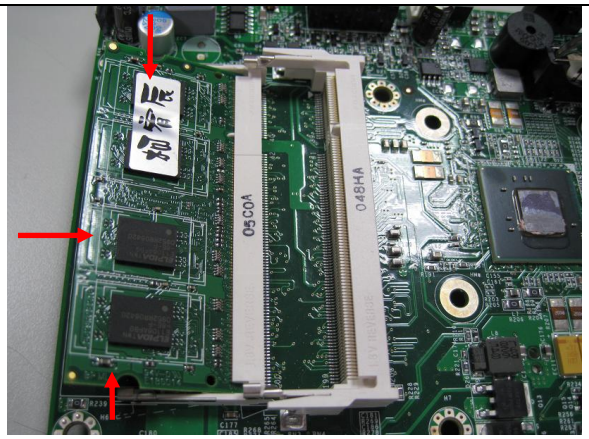
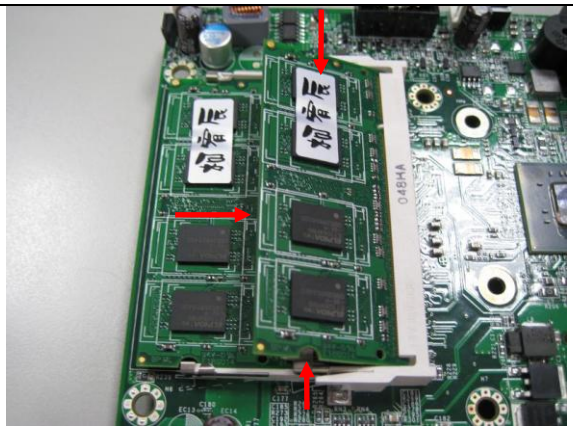
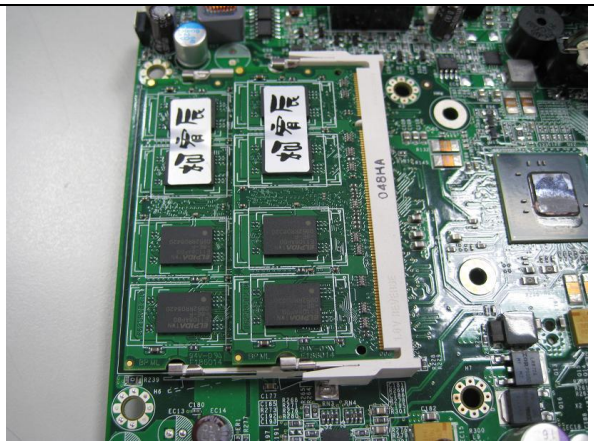


Fig. 2-6 *To set up Heat-sink, extruding push pin of fixed heat-sink*

2.7 Install or Remove a SODIMM

Follow these steps to upgrade RAM module:

Make sure to unplug the power supply before adding or removing DIMMs or other system components. Failure to do so may cause severe damage to both the motherboard and the components.

	
1.Add SODIMM in left slot first	2.Insert SODIMM in left slot first
	
3.Memory install complete in first slot	4.Insert SODIMM in 2nd slot
	
5.Install complete	6.Reverse step from 5 to 1, remove all memory

2.8 Remove and Install Battery

1. Press the metal clip back to eject the button battery (***Fig. 2-12***).
2. Replace it with a new one by pressing the battery with fingertip to restore the battery (***Fig. 2-13***).

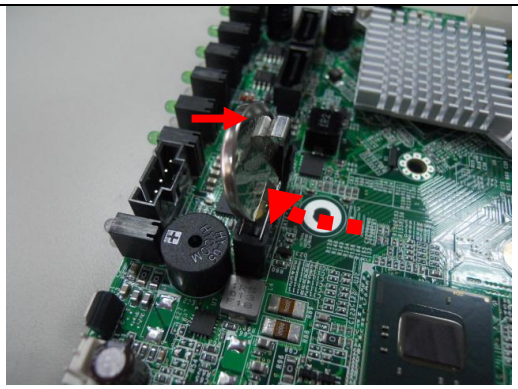


Fig. 2-12 *Eject the battery*

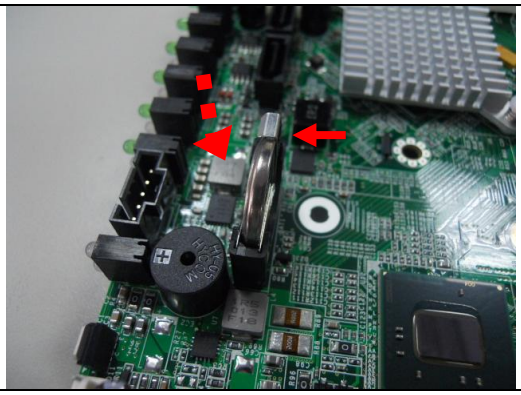


Fig. 2-13 *Restore the battery*

2.9 Install Compact Flash

The system has an internal drive bay for one Compact Flash card drive. If the CF is not pre-installed, you can install it by yourself. Follow the steps below to install the CF:

1. Fasten the five screws to lock bracket together (***Fig. 2-14a, 2-14b***).

Fig. 2-14a *Remove L type base under button case*

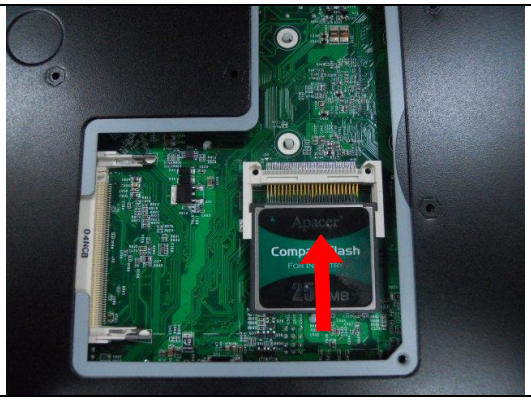
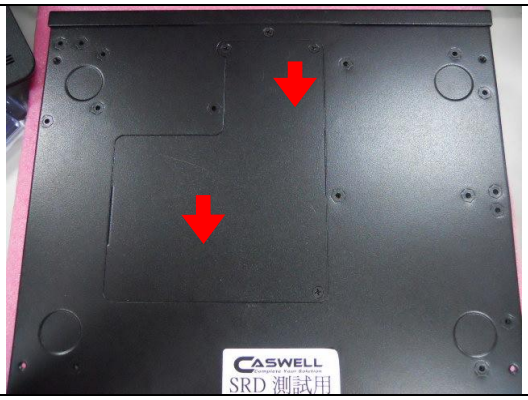


Fig. 2-14b Push *CF into the bracket*

2. Completion CF to the System Chassis (***Fig. 2-15***)

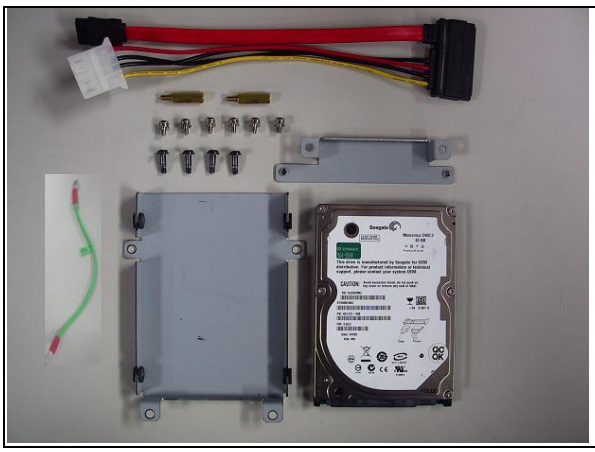
Fig. 2-15 completion *CF in system*



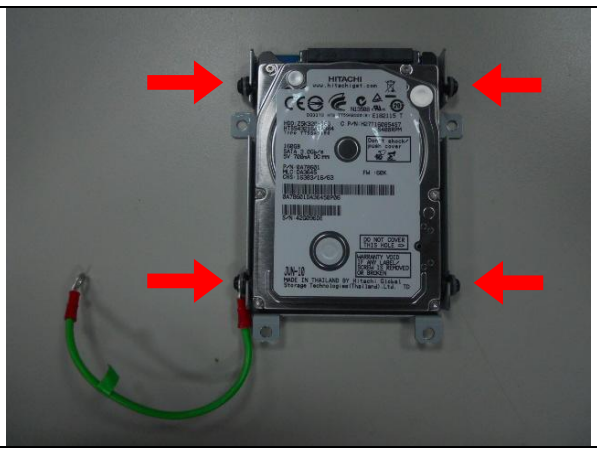
(***Fig. 2-16***).Fix all screws back

2.10 Install 2.5" Hard disk

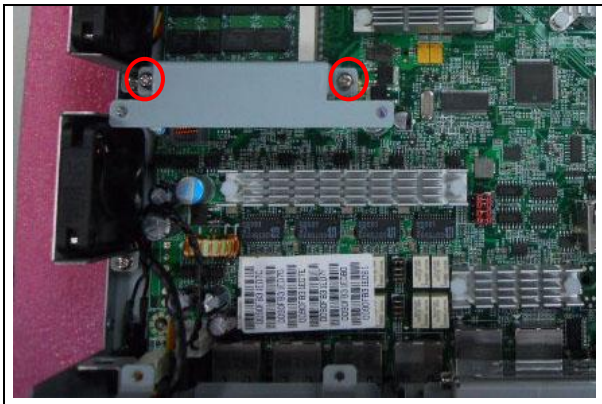
The system has an internal drive bay for one 2.5" hard disk drive. If the HDD is not pre-installed, you can install by yourself. You need the parts from the accessory-bag as shown on ***Figure 2-20***. They are one HDD-bracket, several screws. (from left to right).



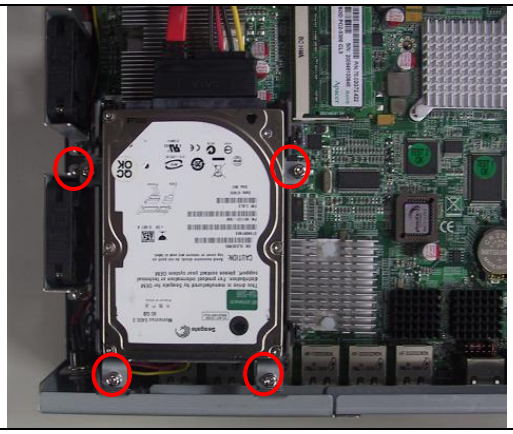
(***Fig. 2-20***)2.5' HDD kit



(***Fig. 2-21***) Fix the hard disk drive on the HDD bracket with four screws. Plug the SATA cable into hard disk drive connector



(***Fig. 2-22***) Fix the hard disk Kit with two screws.

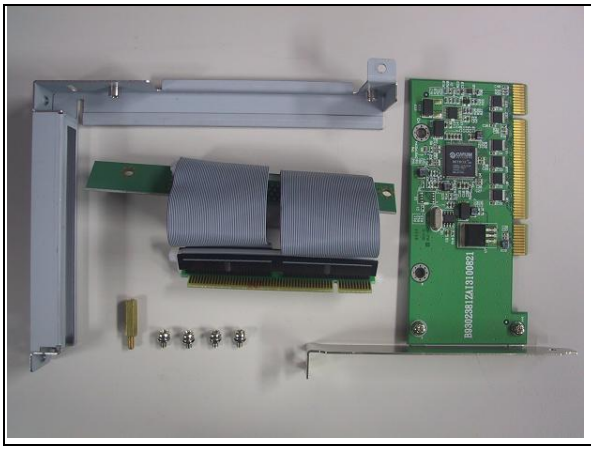


(***Fig. 2-23***) Completion HDD with bracket and fixed screws.

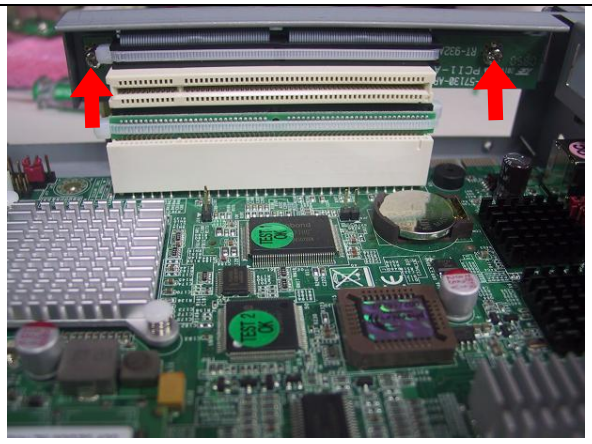
Connect Power Cable and SATA Cable before assemble hard disk. After assemble hard disk, put SATA Cable and Power cable into board.

2.11 Install PCI Card

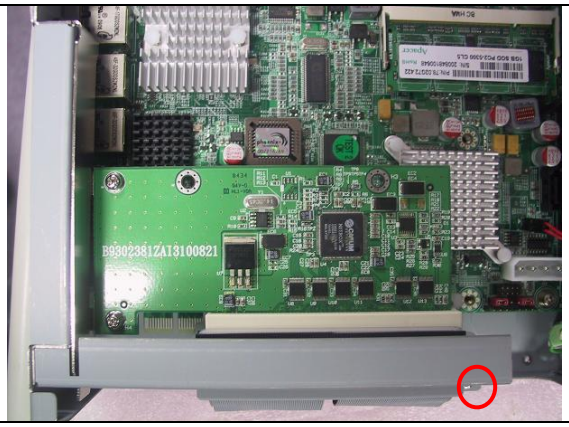
The system supports the installation of PCI Cards. First, must have the PCI riser. If the PCI card and PCI riser is not pre-installed, you can install by yourself. You need the parts from the accessory-bag as shown on ***Figure 2-24***.



(***Fig. 2-24***) PCI Card kit



(***Fig. 2-25***) Fix the Riser Card on the board with three screws.



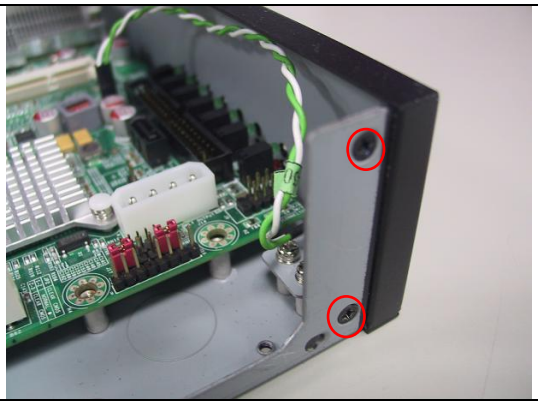
(***Fig. 2-26***) Fix the PCI Card on the Riser Card

(***Fig. 2-27***) Fix the PCI Card on the chassis with two screws.

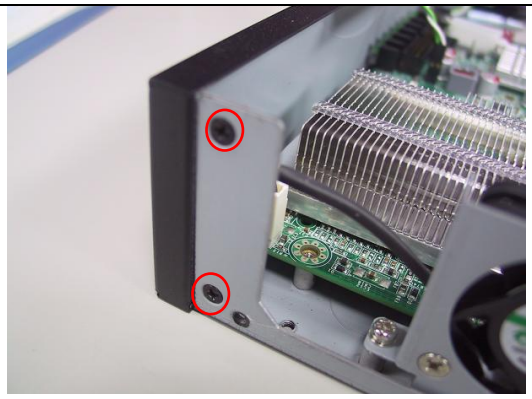
2.12 Remove main board

The following is the remove step instruction of main board.

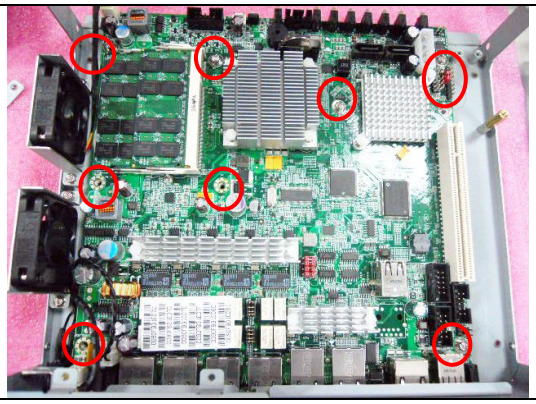
1. Remove all cables from main board.
2. Remove all screws from main board.



Remove all screws from main board



Remove all screws from main board



Remove all screws from main board

Complete remove main board

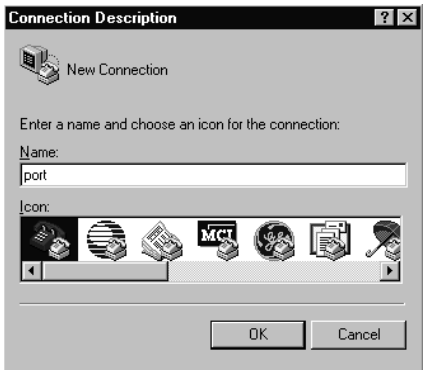
2.13 Use a Client Computer

Connection Using Hyper Terminal

If users use a headless CAD-0210, which has no mouse/keyboard and VGA output connected to it, the console may be used to communicate with CAD-0210.

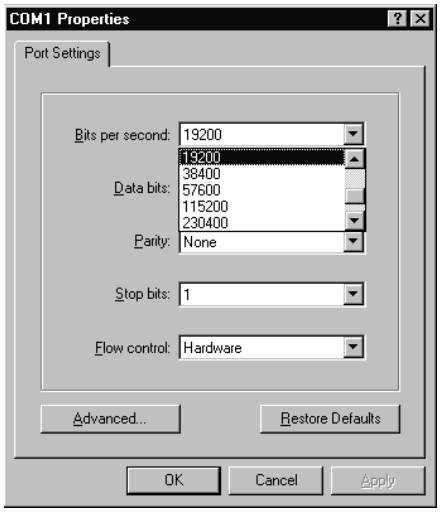
To access CAD-0210 via the console, Hyper Terminal is one of the choices. Follow the steps below for the setup:

1. Execute HyperTerminal under C:\Program Files\Accessories\HyperTerminal
2. Enter a name to create new dial

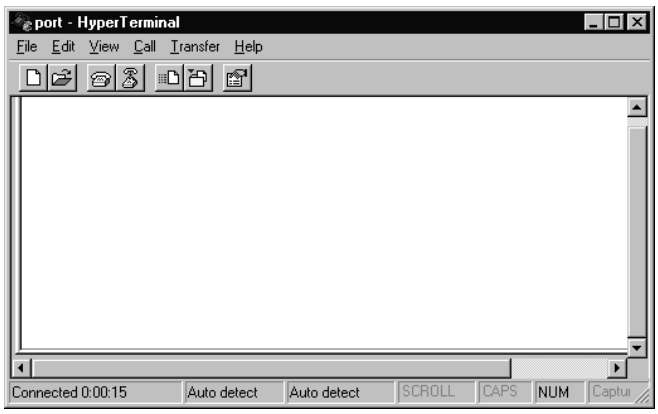


3. For the connection settings, make it Direct to COM1.

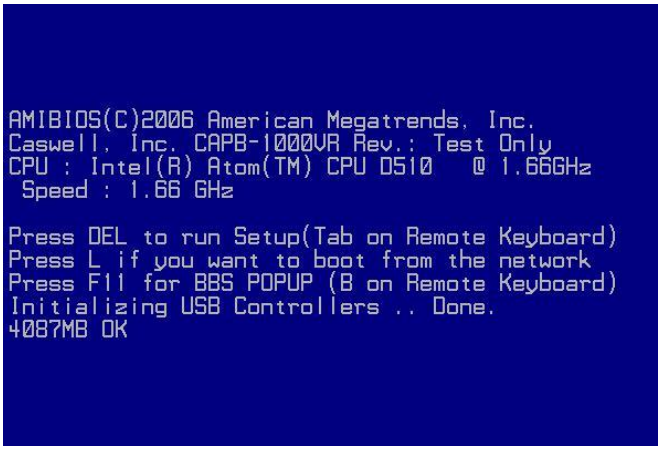
4. Please make the port settings to Baud rate 19200, Parity None, Data bits 8, Stop bits 1



5. Turn on the power of CAD-0210, after following screen was shown



6. You can then see the boot up information of CAD-0210


AMIBIOS(C)2006 American Megatrends, Inc.
Caswell, Inc. CAPB-1000VR Rev.: Test Only
CPU : Intel(R) Atom(TM) CPU D510 @ 1.66GHz
Speed : 1.66 GHz
Press DEL to run Setup(Tab on Remote Keyboard)
Press L if you want to boot from the network
Press F11 for BBS POPUP (B on Remote Keyboard)
Initializing USB Controllers .. Done.
4087MB OK

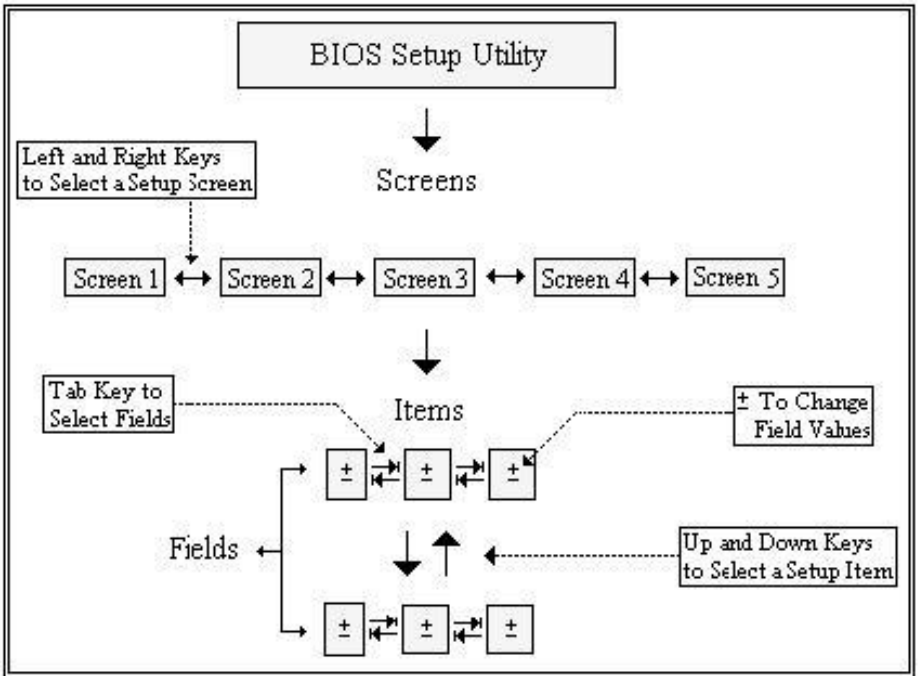
When message “Hit <DEL> if you want to run Setup” appear during POST, after turning on or rebooting the computer, press **<Tab>** key ***immediately*** to enter BIOS setup program.

7. This is the end of this section. If the terminal did not port correctly, please check the previous steps.

Chapter 3 Operation Guide

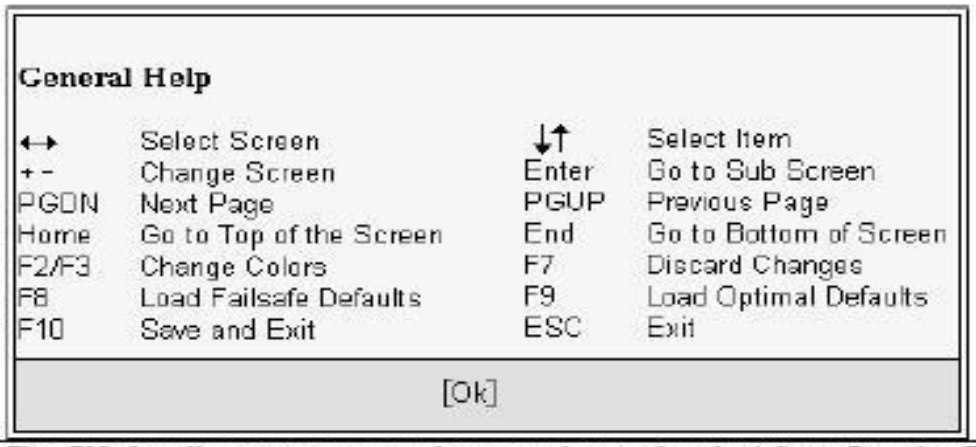
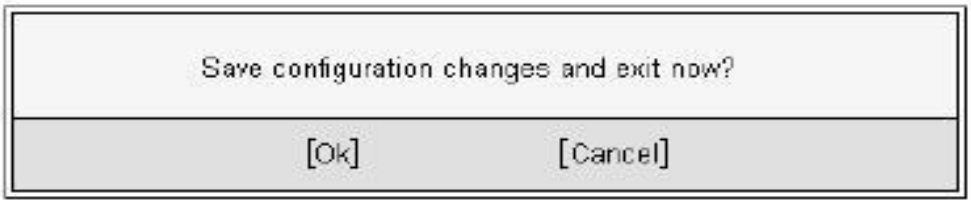
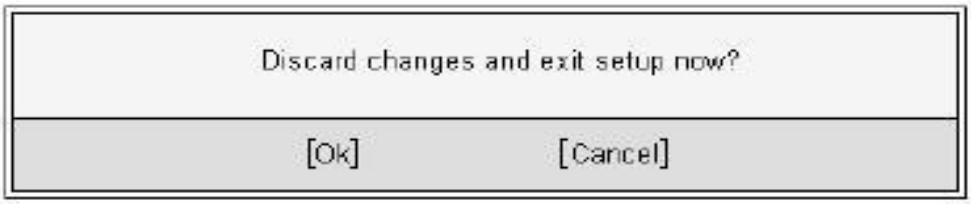
Power on the system, press the <Del> to run BIOS setup. After you press the <Delete> key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Chipset and Power menus.

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. These keys include <F1>, <F10>, <Enter>, <ESC>, <Arrow> keys, and so on.



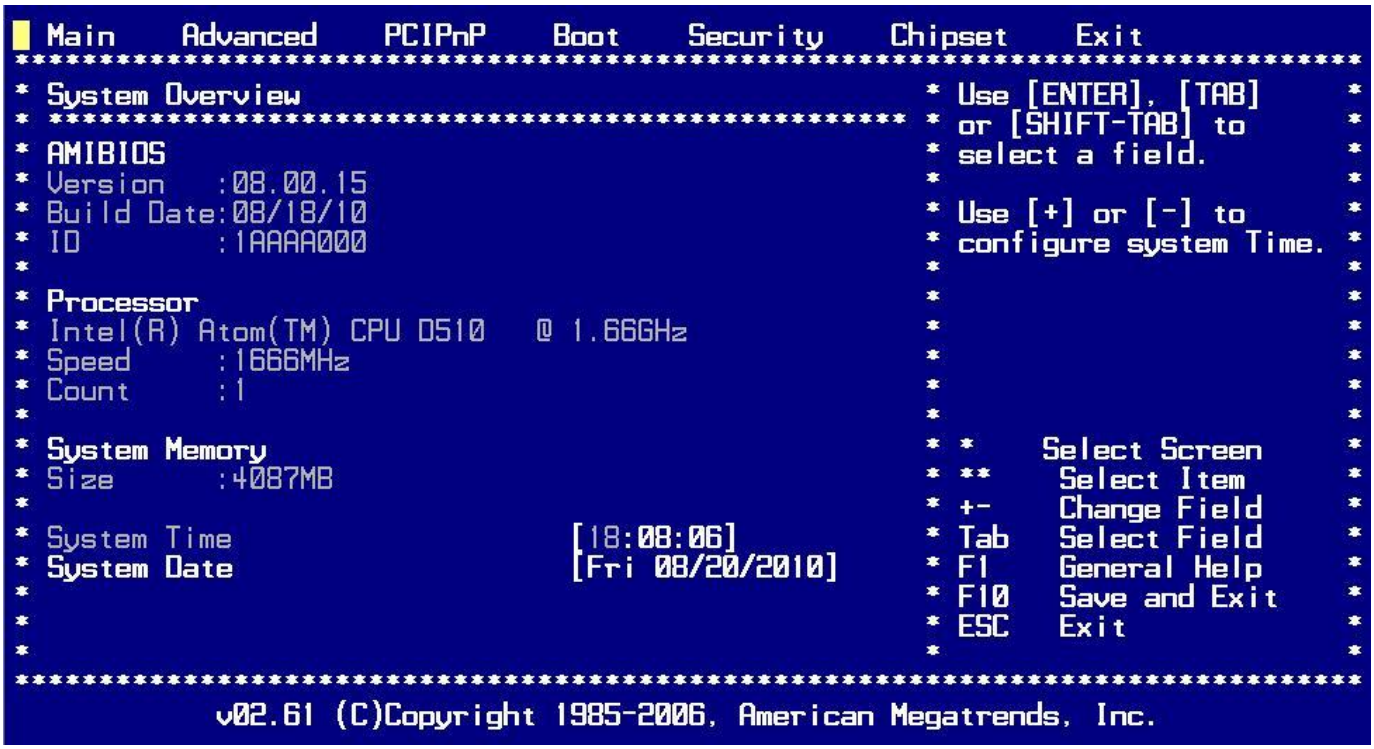
Control Keys

Key	Function
↑↓Up /Down	The *Up and Down* <Arrow> keys allow you to select a setup item or sub-screen.
→ ← Left/Right	The *Left and Right* <Arrow> keys allow you to select a setup screen. For example: Main screen, Advanced screen, Chipset screen, and so on.
+ - Plus/ Minus	The *Plus and Minus* <Arrow> keys allow you to change the field value of a particular setup item. For example: Date and Time.
Tab	The <Tab> key allows you to select setup fields.

Hot Key	Description
F1	The <F1> key allows you to display the *General Help screen*. Press the <F1> key to open the *General Help screen*. 
F10	The <F10> key allows you to save any changes you have made and exit Setup. Press the <F10> key to save your changes. The following screen will appear:  Press the <Enter> key to save the configuration and exit. You can also use the <Arrow> key to select *Cancel* and then press the <Enter> key to abort this function and return to the previous screen.
ESC	The <Esc> key allows you to discard any changes you have made and exit the Setup. Press the <Esc> key to exit the setup without saving your changes. The following screen will appear:  Press the <Enter> key to discard changes and exit. You can also use the <Arrow> key to select *Cancel* and then press the <Enter> key to abort this function and return to the previous screen.
Enter	The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub- screens.

3.1 Main menu

When you first enter the Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the *Main* tab. There are two Main Setup options. They are described in this section.

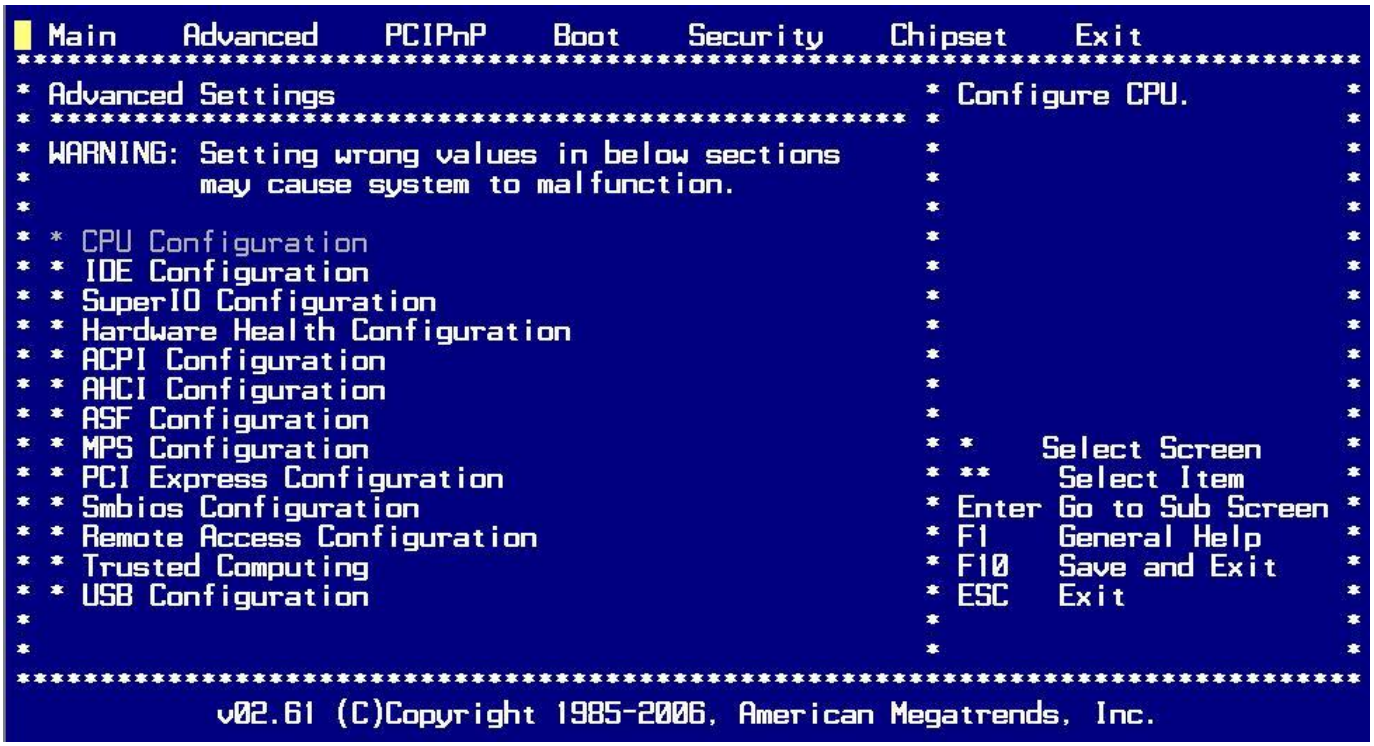


System Date / Time
Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

3.2 Advanced Settings

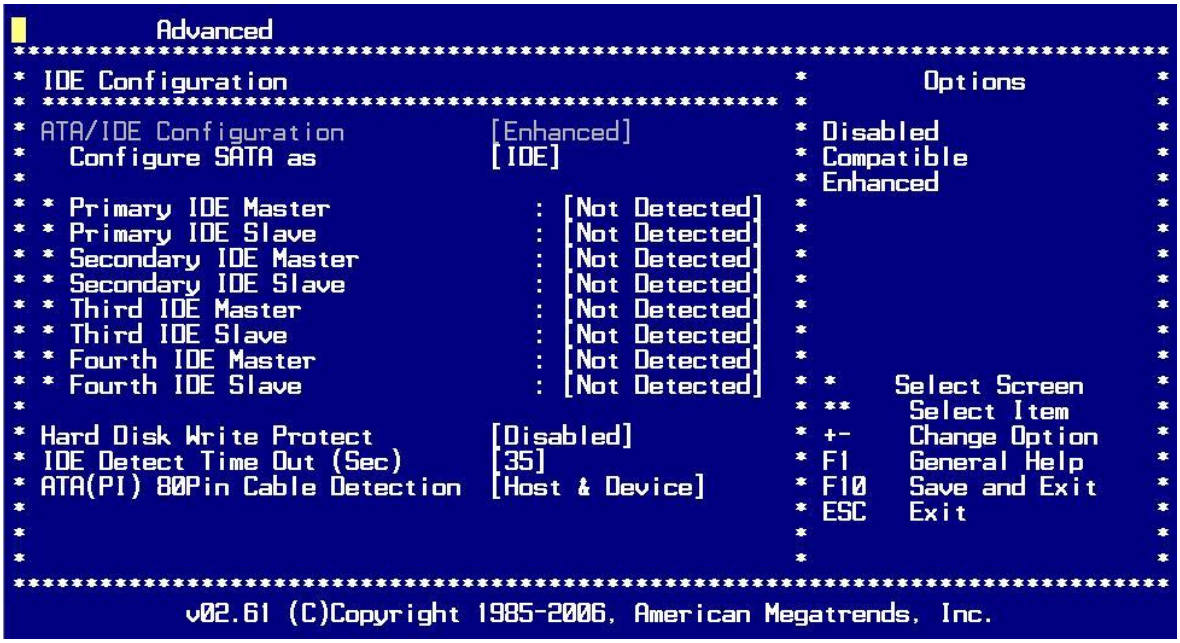
Select the *Advanced* tab from the setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as SuperIO Configuration, to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section. The Advanced BIOS Setup screen is shown below. The sub menus are described on the following pages.

.



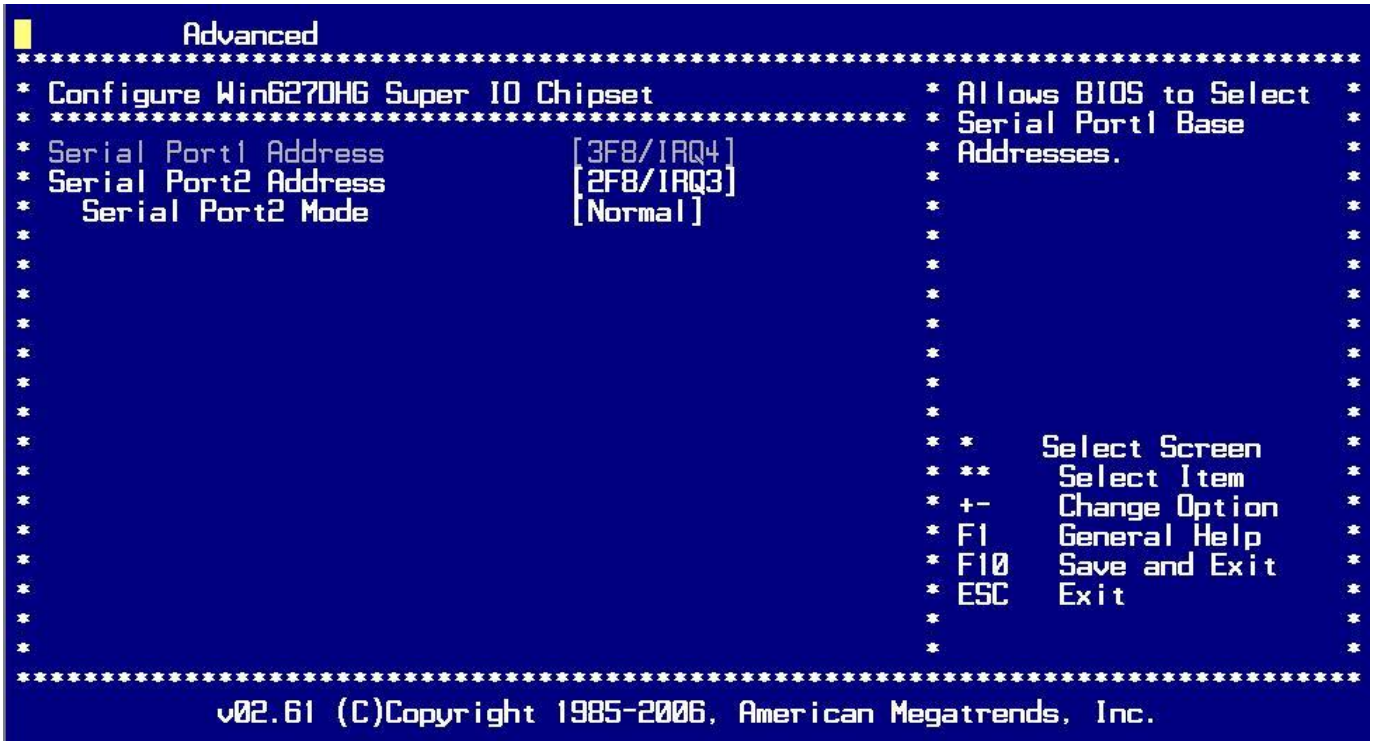
3.3 IDE Configuration

From the IDE Configuration screen, press <Enter> to access the sub menu. Use the up and down <Arrow> keys to select an item. The settings are described on the following pages.


Advanced
IDE Configuration
ATA/IDE Configuration [Enhanced]
Configure SATA as [IDE]
* Primary IDE Master : [Not Detected]
* Primary IDE Slave : [Not Detected]
* Secondary IDE Master : [Not Detected]
* Secondary IDE Slave : [Not Detected]
* Third IDE Master : [Not Detected]
* Third IDE Slave : [Not Detected]
* Fourth IDE Master : [Not Detected]
* Fourth IDE Slave : [Not Detected]
Hard Disk Write Protect [Disabled]
IDE Detect Time Out (Sec) [35]
ATA(PI) 80Pin Cable Detection [Host & Device]
Options
Disabled
Compatible
Enhanced
* Select Screen
** Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.61 (C)Copyright 1985-2006, American Megatrends, Inc.

3.4 Super IO Configuration

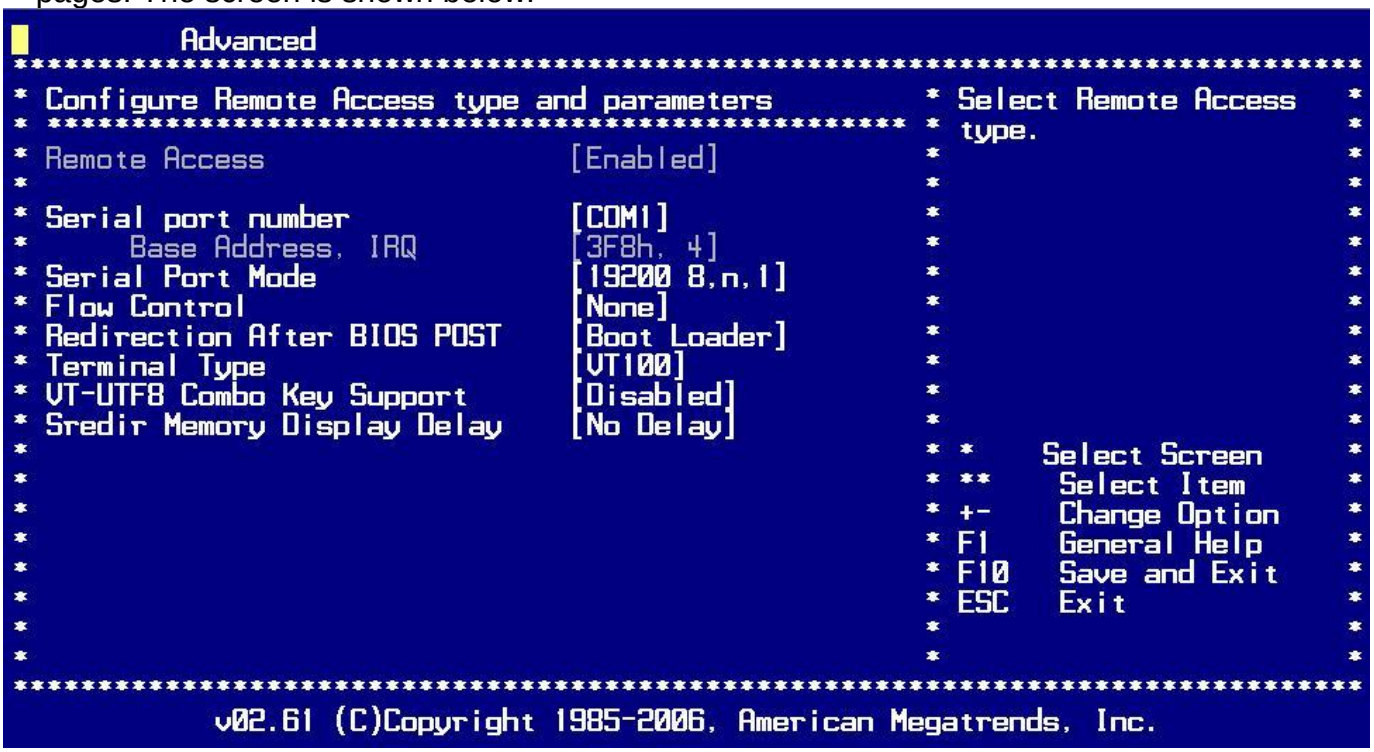
You can use this screen to select options for the Super I/O settings. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.



3.5 Remote Access Configuration

Remote Access Configuration

You can use this screen to select options for the Remote Access Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.



Remote Access

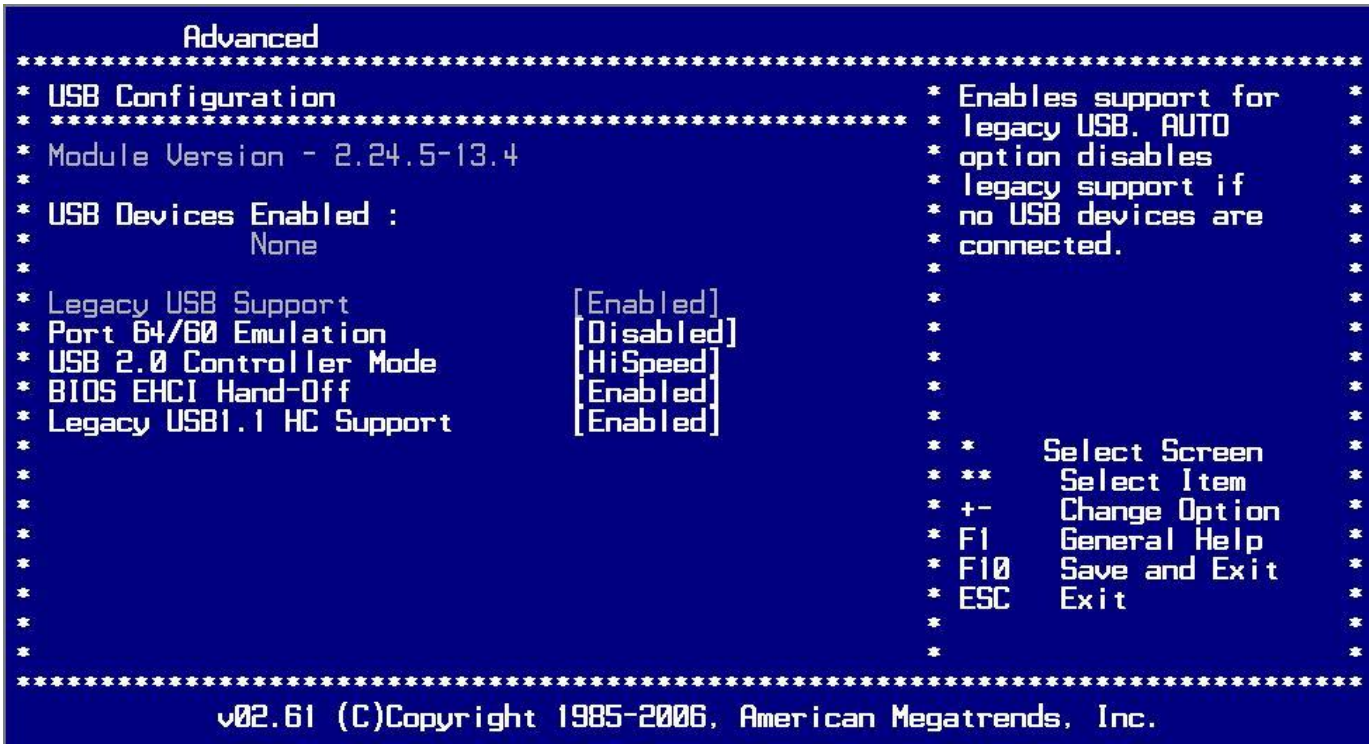
You can disable or enable the BIOS remote access feature here.

Serial Port Number
Select the serial port you want to use for console redirection. You can set the value for this option to either *COM1* or *COM2*.

Serial Port Mode
Select the baud rate you want the serial port to use for console redirection.

3.6 USB Configuration

You can use this screen to select options for the USB Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.


Advanced
USB Configuration
Module Version - 2.24.5-13.4
USB Devices Enabled :
None
Legacy USB Support [Enabled]
Port 64/60 Emulation [Disabled]
USB 2.0 Controller Mode [HiSpeed]
BIOS EHCI Hand-Off [Enabled]
Legacy USB1.1 HC Support [Enabled]
Enables support for legacy USB. AUTO option disables legacy support if no USB devices are connected.
* Select Screen
** Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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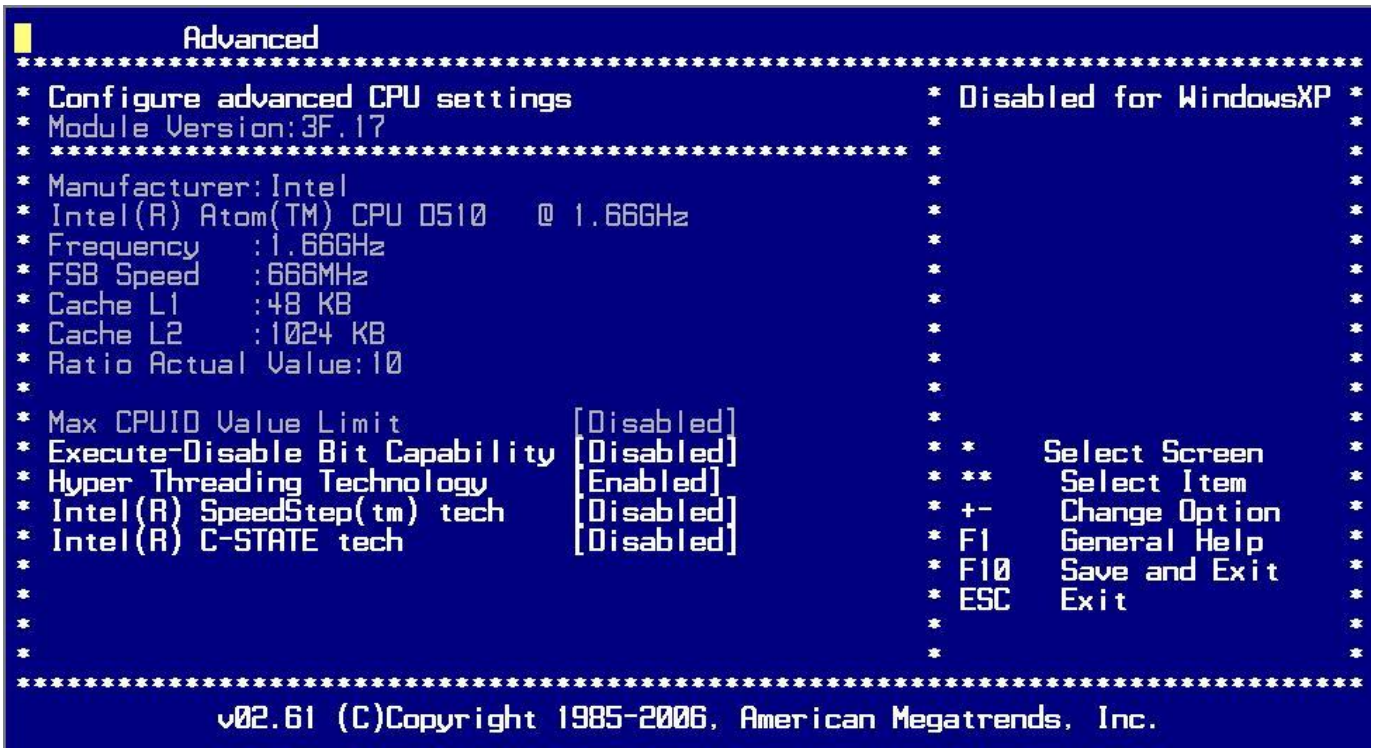
Legacy USB Support
Legacy USB Support refers to the USB mouse and USB keyboard support. Normally if this option is not enabled, any attached USB mouse or USB keyboard will not become available until a USB compatible operating system is fully booted with all USB drivers loaded. When this option is enabled, any attached USB mouse or USB keyboard can control the system even when there is no USB drivers loaded on the system. Set this value to enable or disable the Legacy USB Support. The Optimal and Fail-Safe default setting is *Disabled*.

3.7 CPU Configuration

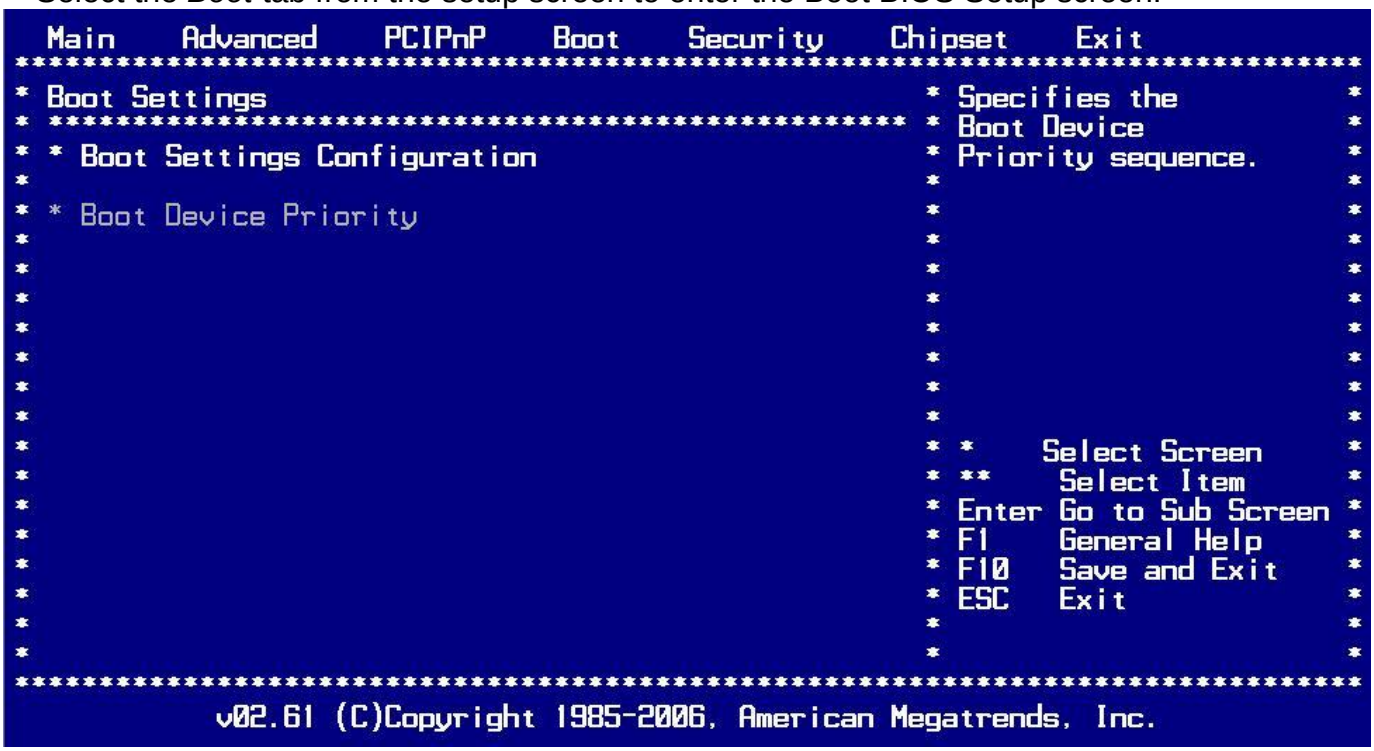
You can use this screen to select options for the CPU Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option.



Note: The CPU Configuration setup screen varies depending on the installed processor.

3.8 Boot Settings

Select the *Boot* tab from the setup screen to enter the Boot BIOS Setup screen.


Main Advanced PCIPnP Boot Security Chipset Exit
Boot Settings
* Boot Settings Configuration
* Boot Device Priority
Specifies the Boot Device Priority sequence.
* Select Screen
** Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
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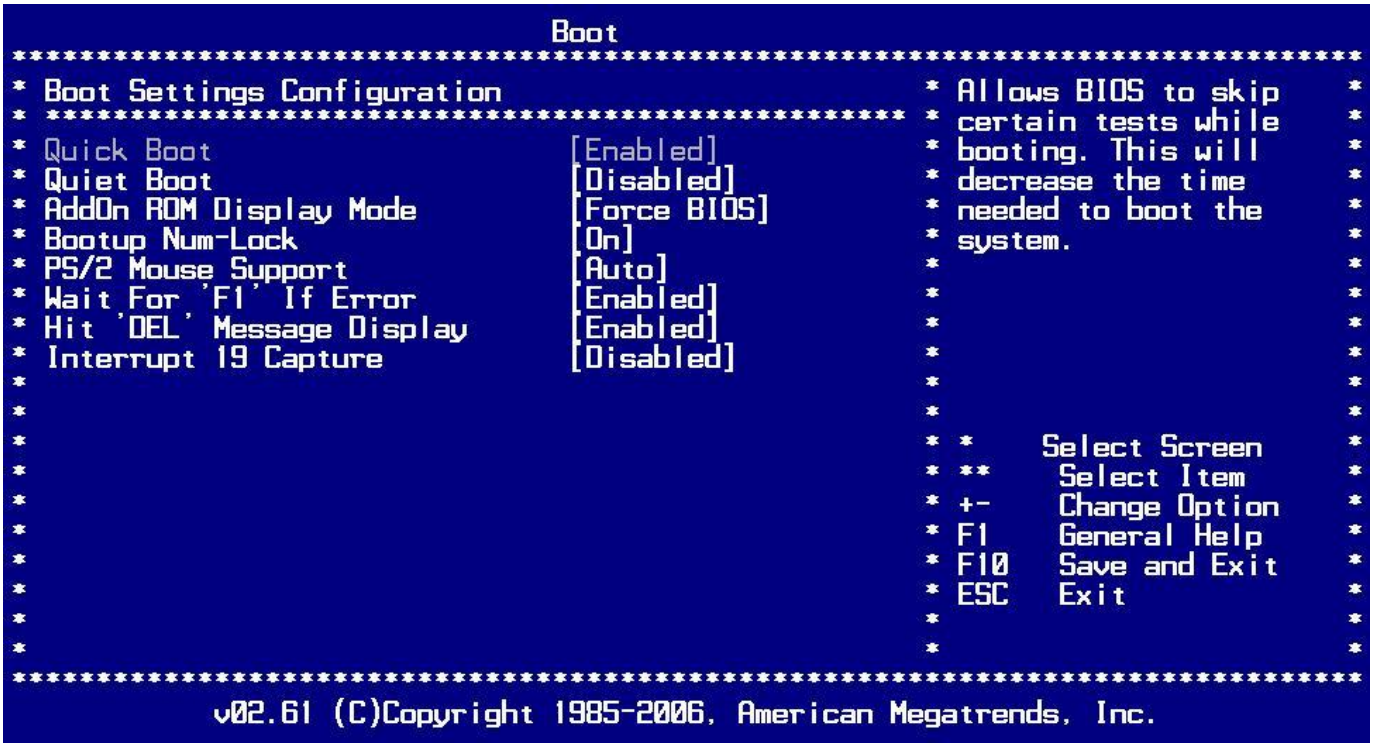
3.9 Boot Settings Configuration

Boot Settings Configuration

Use this screen to select options for the Boot Settings Configuration. Use the up and

down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.


Boot
Boot Settings Configuration
Quick Boot [Enabled]
Quiet Boot [Disabled]
AddOn ROM Display Mode [Force BIOS]
Bootup Num-Lock [On]
PS/2 Mouse Support [Auto]
Wait For 'F1' If Error [Enabled]
Hit 'DEL' Message Display [Enabled]
Interrupt 19 Capture [Disabled]
Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.
* Select Screen
** Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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Quick Boot
The Optimal and Fail-Safe default setting is *Disabled*.

Quiet Boot
Set this value to allow the boot up screen options to be modified between POST messages or OEM logo. The Optimal and Fail-Safe default setting is *Enabled*.

Add-On ROM Display Mode
Set this option to display add-on ROM (read-only memory) messages. The Optimal and Fail-Safe default setting is *Force BIOS*. An example of this is a SCSI BIOS or VGA BIOS.

Boot up Num-Lock
Set this value to allow the Number Lock setting to be modified during boot up. The Optimal and Fail-Safe default setting is *On.*

PS/2 Mouse Support
Set this value to allow the PS/2 mouse support to be adjusted. The Optimal and Fail-Safe default setting is *Enabled*

Wait For 'F1' if error
Wait for F1 key to be pressed if error occurs.

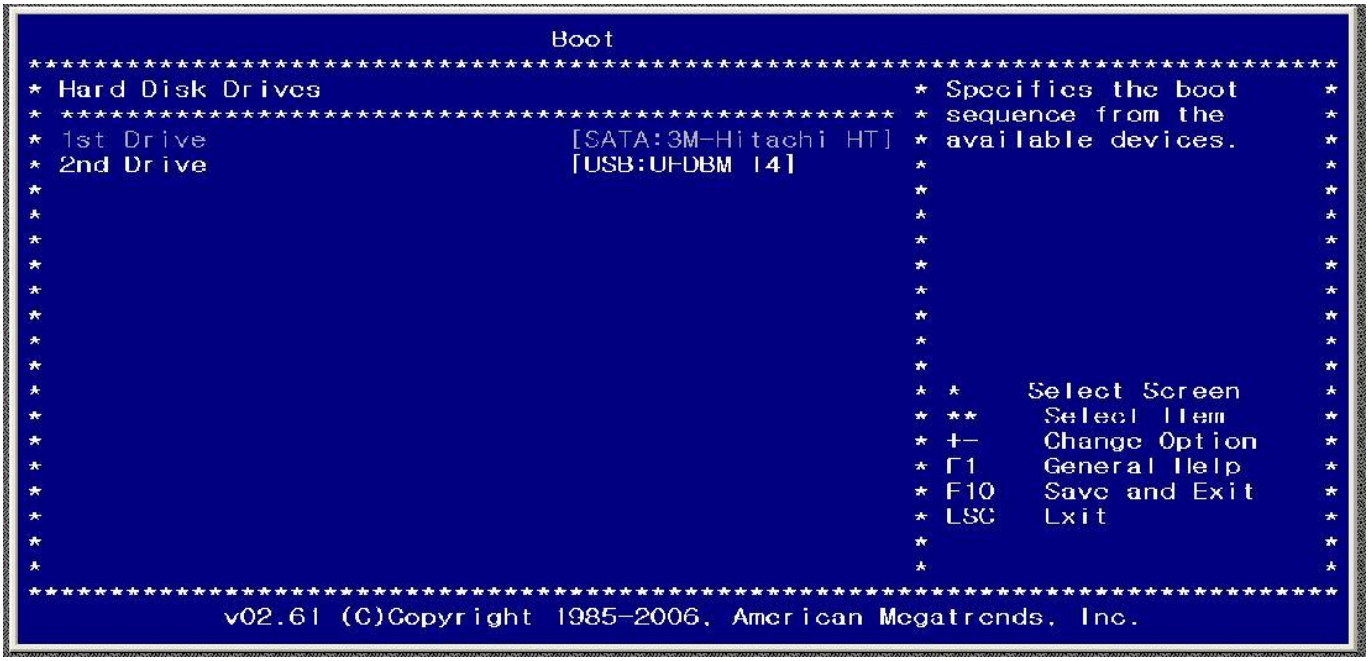
Hit 'Del' Message Display
Displays 'Press DEL to run Setup' in POST.

Interrupt 19 Capture
Set this value to allow option ROMs such as network controllers to trap BIOS interrupt 19.

3.10 Boot Device Priority

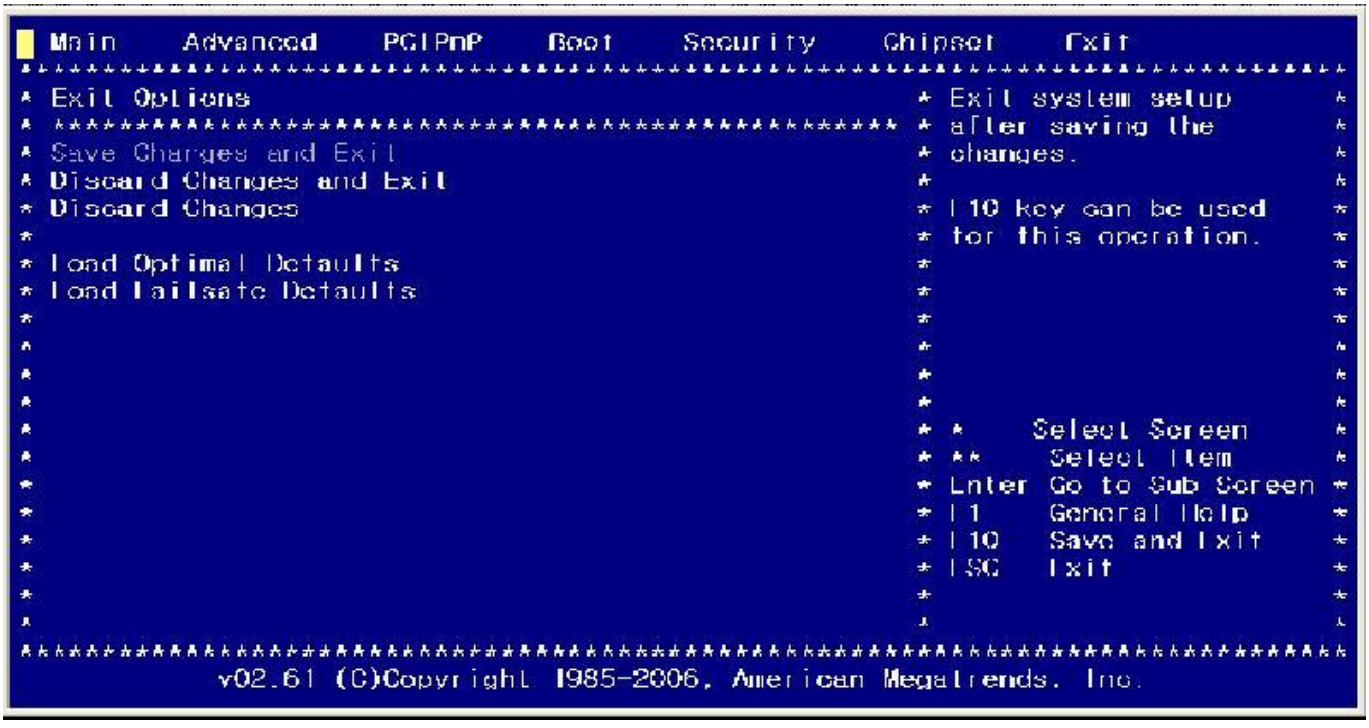
Boot Device Priority

Use this screen to specify the order in which the system checks for the device to boot from. To access this screen, select Boot Device Priority on the Boot Setup screen and press <Enter>. The following screen displays:



3.11 Exit BIOS

Select the *Exit* tab from the setup screen to enter the Exit BIOS Setup screen. You can display an Exit BIOS Setup option by highlighting it using the <Arrow> keys. All Exit BIOS Setup options are described in this section. The Exit BIOS Setup screen is shown below.


Main Advanced PCIPnP Boot Security Chipset Exit
Exit Options
Save Changes and Exit
Discard Changes and Exit
Discard Changes
Load Optimal Defaults
Load Failsafe Defaults
Exit system setup after saving the changes.
F10 key can be used for this operation.
Select Screen
Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
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Saving Changes and Exit
When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Exit Saving Changes from the Exit menu and press <Enter>.

Discarding Changes and Exit
Select this option to quit Setup without making any permanent changes to the system configuration. Select Exit Discarding Changes from the Exit menu and press <Enter>.

Discard Changes
Select Discard Changes from the Exit menu and press <Enter>.

Load Optimal Defaults
Automatically sets all Setup options to a complete set of default settings when you select this option. Select Load Optimal Defaults from the Exit menu and press <Enter>.

Load Fail-Safe Defaults
Automatically sets all Setup options to a complete set of default settings when you select this option. The Fail-Safe settings are designed for maximum system stability, but not maximum performance. Select the Fail-Safe Setup options if your computer is experiencing system configuration problems.
Select Load Fail-Safe Defaults from the Exit menu and press <Enter>.